R E P O R T  R E S U M E S

ED 015 508 CG 001 188

EXPANDING THE BEHAVIOR LABORATORY--FROM CLINIC TO HOME.

BY- PETERSON, ROBERT F.

PUB DATE SEP 67

EDRS PRICE MF-$0.25 HC-$0.52 11P.

DESCRIPTORS- BEHAVIOR THEORIES, *PARENT CHILD RELATIONSHIP, *PARENT INFLUENCE, EXPERIMENTS, EMOTIONAL PROBLEMS, CLINICS, *THERAPEUTIC ENVIRONMENT, THERAPISTS, *HOME PROGRAMS, HOME VISITS, *BEHAVIOR PROBLEMS, REACTIVE BEHAVIOR, BEHAVIOR CHANGE, FAMILY INFLUENCE, PARENT ATTITUDES, SPEECHES.

THE ADVANTAGES AND PROBLEMS OF EXPANDING THE BEHAVIOR LABORATORY FROM THE CLINIC TO THE CHILD'S HOME ARE DISCUSSED. RECENTLY, ATTEMPTS HAVE BEEN MADE TO DELINEATE THE EXACT OPERATIONS RESPONSIBLE FOR TREATMENT EFFECTS. TRADITIONALLY, THERAPY HAS BEEN CLINIC BASED. HOWEVER, HOME VISITS ARE IMPORTANT BECAUSE--(1) THE THERAPIST SHOULD OBSERVE PROBLEM BEHAVIORS AT FIRST HAND, (2) SOME BEHAVIOR CAN ONLY BE OBSERVED IN THE NATURAL SETTING, AND (3) PARENTAL ENVIRONMENT IS PRIMARILY RESPONSIBLE FOR THE DEVELOPMENT OF ACCEPTABLE AND DEVIANT BEHAVIORS OF THE CHILD. IF THE THIRD CAUSE IS ACCEPTED, DEVIANT BEHAVIOR IS LIKELY TO REAPPEAR AFTER TREATMENT IS FINISHED. ACCORDING TO BEHAVIORISTIC TREATMENT METHODS, THE THERAPIST MUST TEACH THE PARENT NEW AND SPECIFIC WAYS OF INTERACTING WITH THE CHILD. SIGNALS ARE OFTEN USED TO TEACH THE MOTHER NEW RESPONSES. TREATMENT OF PROBLEM BEHAVIORS IN THE HOME CAN BE COMBINED WITH EXPERIMENTAL RESEARCH ALTHOUGH THE HOME LACKS SOME ASPECTS OF CONTROL. A RECORDING TECHNIQUE FOUND USEFUL IN MEASURING BEHAVIORS IN A VARIETY OF NATURALISTIC SETTINGS IS DESCRIBED. THIS SPEECH WAS PRESENTED AT THE AMERICAN PSYCHOLOGICAL ASSOCIATION CONVENTION (75TH, WASHINGTON, D.C., SEPTEMBER 1967). (FR)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

ED015508

# Expanding the Behavior Laboratory: From Clinic to Home[1]

Robert F. Peterson

University of Illinois

The fact that a symposium on the "Application of Behavior Modification Techniques in Expanding Behavioral Laboratories" is being held now and not ten years ago has a number of implications for both the psychologists' effectiveness in treating social, educational and clinical problems and the direction of current research efforts. Thus one is led to believe that behavioral scientists are, at long last, beginning to develop and elaborate effective techniques of behavioral control. This is not to say that people have been treating behavior problems from a more traditional viewpoint and have been entirely unsuccessful. What seems to be different in many of the behavior modification procedures is the attempt through careful research, to delineate the exact operations responsible for the treatment effects. In order to evaluate these operations psychologists have moved from one type of laboratory to another. Thus we are brought to considering an expansion of the behavior laboratory into the school, home, and community. In this paper I shall consider some of the advantages and problems of research and treatment in the home. Since the work I am most familiar with has been with parent-child interactions, I shall confine the discussion to that area.

CG 001 188

In considering the home as part of an expanding behavioral laboratory the term "laboratory" suggests only the research side of the study of the relationship between parent and child. There is, of course, a clinical, or treatment side, which is equally important. I would like to first consider some of the implications for expanding the clinical

setting from the office to the home.

There are at least two reasons why behavioral treatment has been primarily confined to the clinic. First of all, it is convenient for the therapist. It increases the efficient use of his time. Secondly, the clinical setting is arranged in such a way that the therapist has control over this environment. Such control is necessary to effectively administer treatment procedures.

It is my contention that in order to do effective therapy, the therapist should observe the problem behaviors first hand. This, of course, means that he must observe the interaction between parent and child wherever the problem behaviors are displayed. These observations would often take place in the child's home. Such a procedure has certain advantages. First, the home is the natural setting for parent - child interactions. Behaviors of concern to both the professional and the parent are not only more likely to be displayed in the residential setting, in some cases this may be the only setting where the problem behavior occurs. Only through observation can the therapist accurately assess the contingencies of reinforcement which operate between parent and child. It should be obvious that this type of information cannot be obtained through current psychometric procedures and may not be accurately reflected in the parents' description of the problem.

Perhaps the strongest argument for observation and treatment in the home lies in the assumption that the parental environment is primarily responsible for the development of both acceptable and deviant behaviors exhibited by the child. If this is true, then it is this environment which must be altered in order to modify the behavior of the child. It also follows that if the child is treated

in the clinic without alteration of the parents' behavior, the problem is much more likely to reappear when the clinic treatment is terminated. Thus it would seem that treatment in the situation where the problem exists is likely to eliminate the difficulty of generalizing the treatment effects from one setting to another or from one person to another.

The presence of a therapist in the child's home raises certain difficulties, however. Any observer no doubt will change the stimulus properties of that setting to some degree, and may disrupt some of the usual behavior patterns of parent and child. This disruption can be minimized however if the observer studiously avoids any interaction with either parent or child while he is in the home assessing the problem. If this procedure is explained beforehand, it is not difficult to obtain parental cooperation in such matters. Usually, after a few visits both parent and child will minimize reacting to the observer's presence and often appear to behave as if he were not there. It may be argued that the observer still provides an element of distortion in the parent-child interaction, and of course this is true. However, this distortion should be weighed against the alternative of bringing the child and parent to the clinic. It seems likely that one will see a more natural interaction in the home with an observer than in another setting which does not at all resemble the child's natural environment.

As I mentioned earlier, the behavior of the parent is considered the basic ingredient in the successful treatment of the child's problem. Therapists of all persuasions would probably agree with such a statement but it appears that few therapists actually treat the parent in such a way that she can modify the child's behavior. Thus the child who is

unmanageable at home may, according to some traditional forms of treatment, be encouraged to express his feelings in play or other types of interpretive psychotherapy. At the same time the parents may be taken into a treatment which is typically directed toward understanding the origin of the child's problem, their own reactions to the child, their own parents, to each other, and possibly the therapist himself. The difficulty with this approach is that the therapeutic efforts may be only vaguely and indirectly related to actually changing the manner in which the parent responds to particular behaviors displayed by the child. Such an approach contrasts sharply with the behavioristic treatment methods put forth in this symposium. Behavior therapists put little emphasis on the initial cause of the child's problem, and devote maximum effort toward the elimination of parental support for undesirable behavior and attempt to arrange conditions which will maintain acceptable behavior. This means that the therapist must teach the parent some new but very specific ways to interact with her child. Such instruction may take a variety of forms. For example, O'Leary, O'Leary and Becker (1967) attempted to increase cooperative responses between two brothers, ages 6 and 3, by initially having the therapist reinforce the behaviors with candy. Subsequently, a token mark on a blackboard replaced the candy. The mother was then instructed to use the token procedure and was given gestural signals by the therapist as to when to dispense the tokens. Ultimately these signals were reduced and the mother was, after a short time, able to dispense the tokens at the correct time without any help from the therapist. In an earlier study, Hawkins, Peterson, Schweid, and Bijou (1966) used one gestural signal to indicate that the mother should tell the child to stop whatever he was doing; a second to place

the child in his room and lock the door; and a third to indicate she should give the child attention, praise, and physical contact. Other cues have also been used. Wahler, Winkel, Peterson and Morrison (1965) employed a light on a playroom wall which the therapist blinked in order to signal the mother when to respond. This study, however, was done in the clinic rather than in the child's home.

It should be noted that instruction through the use of signals or direct demonstration has been used largely because of the failure of other techniques which attempt to change the parents' behavior. Simply telling the mother what to do may result in failure because she does not respond to the child at the correct time, for the correct behavior or with the correct response. It would seem that just as the child needs a system of differential consequences applied to his behavior, so does the parent. Thus the chain is--parent reacts to child, therapist reacts to parent, and hopefully, changes in the child's behavior maintain the parents' newly acquired responses.

Treatment of problem behaviors in the home can be combined with experimental research. An investigator may study the effectiveness of certain clinical procedures or any of a number of variables which influence parent-child interactions. This means that the home is also serving as a behavioral laboratory. Considering it as a laboratory, the home certainly lacks some of the aspects of control usually found in an experimental research setting. Thus, the phone may ring, a salesman may appear, a neighbor may visit--all at the "wrong time" from the investigator's point of view. These problems can usually be controlled if the parent is instructed how to handle them beforehand. One may note, however, that the occurrence of uncontrolled events may

actually prove valuable especially when they suggest important but previously unconsidered variables relevant to the research problem under study. It should be obvious that when compared to the home, all other laboratories for the study of mother-child interaction will be impoverished with regard to the types of stimuli which influence the behavior of parent and child. The study of such stimuli may be impossible in other settings simply because the stimuli have yet to be isolated and defined. Even when definition has been accomplished it may be difficult to reproduce or manipulate certain stimuli in an artificial laboratory.

Take amount of sleep, for example. This variable may function as a setting event for a host of behaviors. A possible effect of such a variable was recently noted by the author who observed a four-year old boy who exhibited a variety of undesirable behaviors including head-banging, biting, throwing, and crying. Although these responses were primarily controlled by certain responses on the part of the child's mother, their frequency did vary from day to day. Some of the variation appeared to be correlated with the number of hours of sleep allowed the child. When the child was put to bed early, the deviant behaviors declined somewhat; when he was put to bed late, the deviant behaviors increased. Although other conditions might of course be correlated with the change in undesirable responses, the number of hours in bed appeared to be a variable worthy of additional study.

In further considering the home as a laboratory, one is soon brought to the question of what data to record and how to record it. Regardless of the type of technique used, it may be wise to delay data gathering until both parent and child have become accustomed to the

presence of an observer. Such a procedure may reduce or eliminate the recording of extremely variable data.

A recording technique refined in the laboratory of Dr. Sidney Bijou has proved to be valuable in measuring behaviors which occur in a variety of naturalistic settings. This technique involves defining certain behaviors of interest in a non-inferential fashion, largely on the basis of the topography of the response. The total period of observation is then divided into small time units and the behaviors are recorded as either present or absent in each time unit. Thus one might record the frequency of behaviors like crying, by defining it as any loud wailing sound of more than 3 seconds' duration and noting the number of 10-second intervals in which the behavior was observed.

A good example of the type of data obtained through the use of such a recording system is provided in the previously cited study by Hawkins, et al. (1966) and may be seen in Figure 1. In this case nine objectionable behaviors such as removing clothing, hitting or kicking others, calling names, etc. were defined topographically and recorded as present or absent in any 10-second interval of observation. In this study the child's mother was instructed through gestures to isolate her child in his room following the objectionable behaviors. The effects of the isolation procedure were assessed by alternating this procedure with periods where no isolation was employed. Follow-up observations three weeks after the end of treatment showed the child to be much improved.

It should perhaps be noted that the occurrence, nonoccurrence system of recording just described may introduce an element of distortion into the data. This distortion results from dividing each minute of

observation into an arbitrary number of intervals. Thus if each minute is divided into 20-second intervals, the maximum frequency for a particular response is three per minute; if 10-second intervals are employed the maximum rate is 6 responses per minute, and so on. Thus the higher the actual frequency of behavior, the smaller the interval should be in order to approximate the actual rate of response as closely as possible. If the intervals are too large, the true frequency of response will be underestimated. Nevertheless this system is helpful in recording the duration of nondiscrete high frequency behaviors, and will reflect relative differences in the rate of response over a variety of experimental conditions.

Some behaviors, however, may occur at rather low frequencies, such as once or twice a day, and still be considered a serious problem. Inappropriate toileting or severe aggressive behavior might fall into this category, for example. In this case the use of a brief time interval to record the presence or absence of a behavior is not appropriate. The interval must be greatly expanded, perhaps to the hour, day, or week. Here it is often helpful to instruct parents in recording techniques and have them keep a daily record of the response.

In summary, I have tried to point out some of the advantages and problems involved in both clinical treatment and behavioral research carried out in the child's home. Although only a few studies involving behavior therapy techniques have been attempted in this setting, it has been demonstrated that vigorous experimental research and effective clinical treatment need not be incompatible. If anything, they can complement one another and extend our clinical effectiveness while at the same time increase our knowledge of the conditions which produce and maintain both normal and deviant behaviors.

## References


O'Leary, K. D., O'Leary, Susan, & Becker, W. C. Modification of a deviant sibling interaction pattern in the home. Behav. Res. & Therapy, 1967, 5, 113-120.

Hawkins, R. P., Peterson, R. F., Schweid, Edda, & Bijou, S. W. Behavior therapy in the home: Amelioration of problem parent child relations with the parent in a therapeutic role. J. exp. Child Psychol., 1966, 4, 99-107.

Wahler, R. G., Winkel, G. H., Peterson, R. F., & Morrison, D. C. Mothers as behavior therapists for their own children. Beh. Res. & Therapy, 1965, 3, 113-129.

## Footnote

1. Paper presented in a symposium on The Application of Behavior Modification Techniques in Expanding Behavioral Laboratories, at the 75th annual meeting of the American Psychological Association, Washington, D. C., September 1967.

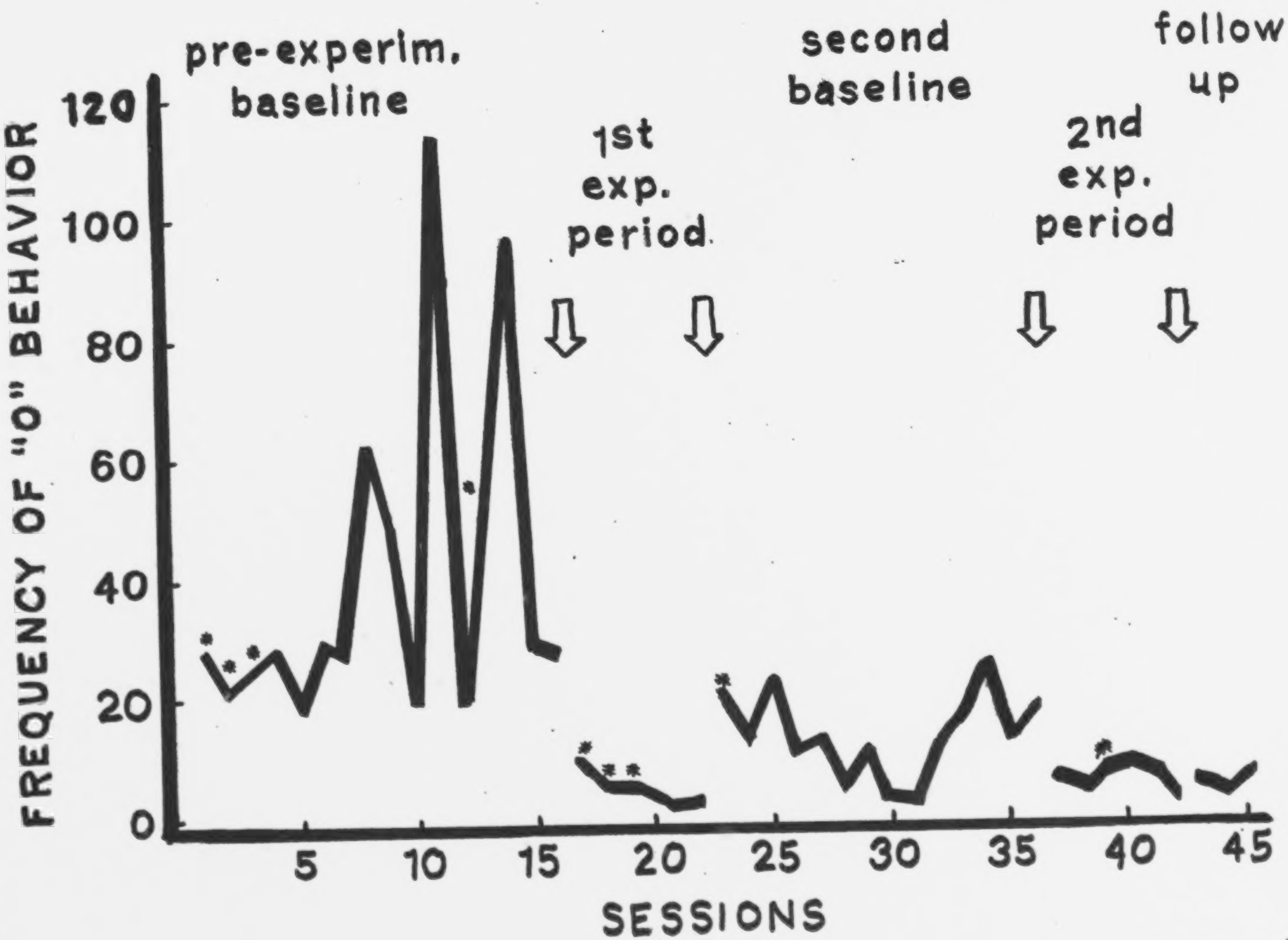
pre-experim. baseline
1st exp. period
second baseline
2nd exp. period
follow up
FREQUENCY OF "O" BEHAVIOR
120
100
80
60
40
20
0
5
10
15
20
25
30
35
40
45
SESSIONS

FIG. 1.